

NEW CONCEPT IN ELIMINATION OF MICROBIALS

Over time the Air Conditioning Industry has embraced HEPA filtration as the benchmark for obtaining air purity and control, and although this system has been effective, it's far from infallible. High efficiency filtration subscribes to the theory that if you remove all the particles, then with the particles, you remove all the problems. The reality is that HEPA filtration is only partially successful in this as the smaller pathogens pass straight through.

The Microgenix system however works to directly achieve the goal of eliminating all harmful airborne contaminants that may threaten your environment using a process that is specifically engineered to do what HEPA can't, at less than half the fan energy.

The Microgenix system has capabilities that have long been thought impossible. Using very sophisticated science the system destroys rather than captures dangerous pathogens. In an era of increasing incidence of infectious outbreaks (SARS, Bird Flu, TB) that have the potential to affect us all, the Microgenix system has the ability to offer a level of protection previously unavailable.

The Microgenix Air Purification™ system combines two very powerful principles.

Biogreen3000™ activated Matrix

Using a polyester fabric (matrix) impregnated with Biogreen3000™ (a patented anti microbial liquid) micro-organisms are killed on contact. The applied Biogreen3000™ builds molecular charged spears that attract and physically rupture the cell membranes and peptide envelopes, and then expose the cell of the micro-organisms to high concentrations of chlorine ions. This first level of elimination kills most pathogens. The matrix attracts only living particles. Non-living matter passes through the system bouncing off the "intelligent" anti microbial surface leaving the matrix free from clogging.

Often viruses travel in lumps of living matter and "hide inside" them similar to a Trojan horse. The matrix kills the living matter and separates the much smaller viruses exposing them to the spears. Other non cell based pathogens (spores and moulds) then pass through the matrix and are exposed to a lethal dose of UV light in the second stage.

UV Light

UV Light is a natural "cleaner" and known since the late 1940's to be effective against micro-organisms. UV light by itself (without the Biogreen3000™ activated Matrix) however requires an enormous amount of energy and long exposure times to be effective. In the Microgenix Air Purification™ system the majority of the work is done by the Matrix with the UV light chamber ensuring the remaining organisms are annihilated. Contaminated air entering the UV light chamber passes through an air turbulator. The disruption to the laminar airflow allows air to pass close by the UV light source and increases the exposure time by a factor of 4. This reduces the energy demand for the UV light chamber and significantly increases the effectiveness. The Microgenix™ UV light chamber uses 254nm lamps in sufficient number to give a lethal dose to most moulds and spores in a single pass.

The Microgenix system can also be ordered with a special light chamber for odour control. Under this configuration Ozone is produced to destroy odours, with the excess ozone being removed from the air before exiting the unit.

The system has been developed to a level where its effectiveness can assist many applications. Given the continual negative publicity that continues to be prominent in our community about our Health System. Technological breakthroughs like this are welcomed by proactive and cost conscious engineers and administrators. Such a system has the potential to save business both in direct energy costs as well as substantially reducing their risk of carrying and passing contagious illnesses.

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